

C-104 Submit Electronically Via OCD Permitting	State of New Mexico Energy, Minerals & Natural Resources Department OIL CONSERVATION DIVISION	Revised July 9, 2024
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REQUEST FOR ALLOWABLE AND AUTHORIZATION TO TRANSPORT**Section 1 - Operator and Well Information**

Submittal Type: ☐ Test Allowable (C-104RT) ☒ New Well (C-104NW) ☐ Recomplete (C-104RC) ☐ Pay Add (C-104RC) ☐ Amended	
Operator Name: NOVO OIL & GAS NORTHERN DELAWARE, LLC	OGRID: 372920
Property Name and Well Number: CASSIUS FED COM 1510 234H	Property Code: 332260
Mineral Owner: ☐ State ☐ Fee ☐ Tribal ☒ Federal	API Number: 30-015-49374
Pool Name: Purple Sage; Wolfcamp	Pool Code: 98220

Section 2 – Surface Location

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County
B	22	23 S	29 E		113 NORTH	1918 EAST	32.29752°N	103.97024°W	EDDY

Section 3 – Completion Information

Producing Method FLOWING	Ready Date 5/21/2024	Perforations MD 11,808' - 21,779'	Perforations TVD FTP: 11,012 LTP: 11,100
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Section 4 – Action IDs for Submissions and Order Numbers

List Action IDs for Drilling Sundries	Was an Order required / needed (Y/N), if yes list Order number:
C-104 RT Action ID (if C-104NW): N/A	Communitization Agreement ☐ Yes ☒ No, Order No.
Surface Casing Action ID: 109177	Unit: ☐ Yes ☒ No, Order No.
Intermediate 1 Casing Action ID: 137541	Compulsory Pooling: ☐ Yes ☒ No, Order No.
Intermediate 2 Casing Action ID: N/A	Down Hole Commingling: ☐ Yes ☒ No, Order No.
Production Casing Action ID: 137541	Surface Commingling: ☐ Yes ☒ No, Order No.
All casing was pressure tested in accordance with NMAC ☒ Yes ☐ No	Non-standard Location: ☐ Yes ☒ No ☐ Common ownership Order No.
Liner 1 Action ID: N/A	Non-standard Proration: ☐ Yes ☒ No, Order No.
Casing was installed prior to OCD's Action ID system (Y/N): N	Simultaneous Dedication: ☐ Yes ☒ No, Order No.

Section 5 - Operator Signature and Certification

☒ I hereby certify that the required Water Use Report has been, or will be, submitted for this well's completion.	
☒ I hereby certify that the required Fracfocus disclosure has been, or will be, submitted for this well's completion.	
☒ I hereby certify that the rules of the Oil Conservation Division have been complied with and that the information given above is true and complete to the best of my knowledge and belief.	
Name Jean A Cooper	Email: jean.cooper@permianres.com
Title Regulatory Analyst	Date 8/12/2024

C-102 Submit Electronically Via OCD Permitting	State of New Mexico Energy, Minerals & Natural Resources Department OIL CONSERVATION DIVISION	Revised July 9, 2024	
		Submittal Type:	☐ Initial Submittal
			☐ Amended Report
		☒ As Drilled	

WELL LOCATION INFORMATION

API Number 30-015-49374	Pool Code 98220	Pool Name PURPLE SAGE; WOLFCAMP
Property Code 332260	Property Name CASSIUS FED COM 1510	Well Number 234H
OGRID No. 331165	Operator Name EARTHSTONE OPERATING, LLC	Ground Level Elevation 2997'
Surface Owner: ☐ State ☐ Fee ☐ Tribal ☒ Federal		Mineral Owner: ☐ State ☐ Fee ☐ Tribal ☒ Federal

Surface Location

UL B	Section 22	Township 23 S	Range 29 E	Lot	Ft. from N/S 113 NORTH	Ft. from E/W 1918 EAST	Latitude 32.29752°N	Longitude 103.97024°W	County EDDY
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Bottom Hole Location

UL A	Section 10	Township 23 S	Range 29 E	Lot	Ft. from N/S 149 NORTH	Ft. from E/W 389 EAST	Latitude 32.32663°N	Longitude 103.96535°W	County EDDY
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Dedicated Acres 640	Infill or Defining Well INFILL	Defining Well API 30-015-49371	Overlapping Spacing Unit (Y/N) N	Consolidation Code Purple Sage; Wolfcamp (98220)
Order Numbers. N/A all under JOA			Well setbacks are under Common Ownership: ☒ Yes ☐ No	

Kick Off Point (KOP)

UL A	Section 22	Township 23 S	Range 29 E	Lot	Ft. from N/S 487 NORTH	Ft. from E/W 599 EAST	Latitude 32.29648°N	Longitude 103.96597°W	County EDDY
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First Take Point (FTP)

UL P	Section 15	Township 23 S	Range 29 E	Lot	Ft. from N/S 343 SOUTH	Ft. from E/W 474 EAST	Latitude 32.29876°N	Longitude 103.96557°W	County EDDY
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Last Take Point (LTP)

UL A	Section 10	Township 23 S	Range 29 E	Lot	Ft. from N/S 346 NORTH	Ft. from E/W 376 EAST	Latitude 32.32608°N	Longitude 103.96531°W	County EDDY
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Unitized Area or Area of Uniform Interest N/A one fed lease	Spacing Unit Type ☒ Horizontal ☐ Vertical	Ground Floor Elevation: 2997'
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OPERATOR CERTIFICATIONS

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and, if the well is a vertical or directional well, that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of a working interest run leased mineral interest, or to a voluntary pooling agreement or a compulsory pooling order here to fore entered by the division.

If this well is a horizontal well, I further certify that this organization has received the consent of at least one lessee or owner of a working interest or unleased mineral interest in each tract (in the target pool or formation) in which any part of the well's completed interval will be located or obtained a compulsory pooling order from the division.

Jean A Cooper 8/12/2024

Signature Date

Jean A Cooper

Printed Name

jean.cooper@permianres.com

Email Address

SURVEYOR CERTIFICATIONS

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.



Signature and Seal of Professional Surveyor
FILIMON F. JARAMILLO

Certificate Number

PLS 12797

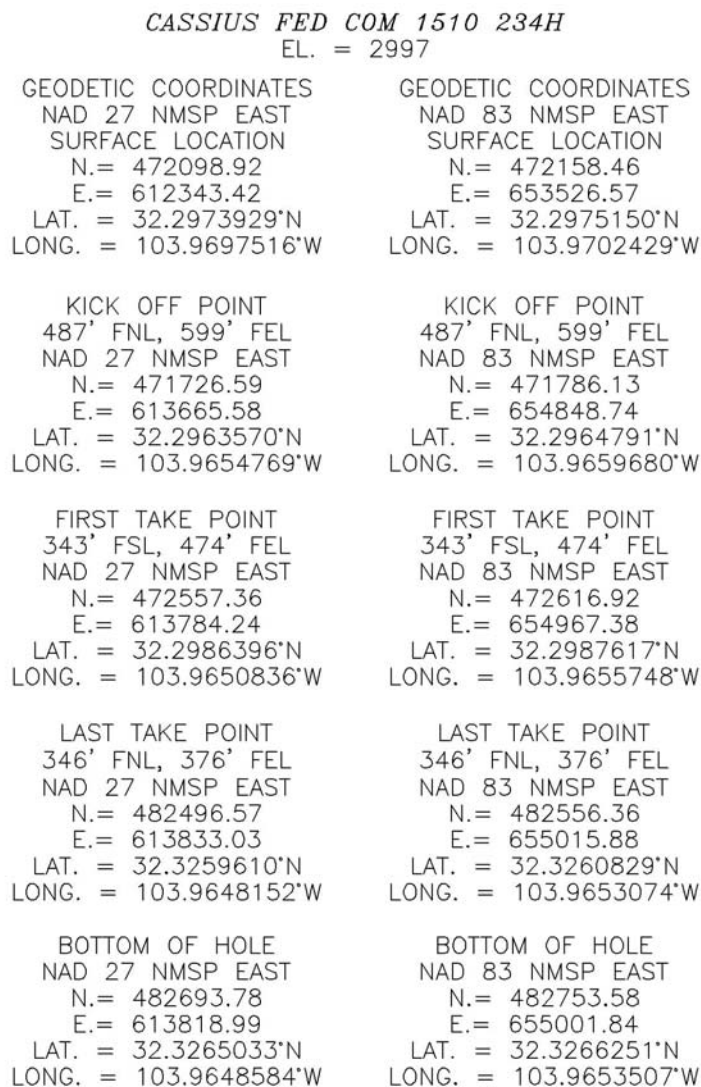
Date of Survey

AUGUST 9, 2024

SURVEY NO. 8218

Note: No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.

Surveyors shall use the latest United States government survey or dependent resurvey. Well locations will be in reference to the New Mexico Principal Meridian. If the land is not surveyed, contact the OCD Engineering Bureau. Independent subdivision surveys will not be acceptable.



CORNER COORDINATES TABLE				CORNER COORDINATES TABLE			
NAD 27 NMSP		EAST		NAD 83 NMSP		EAST	
A	- N.=	482866.71	E.= 608895.31	A	- N.=	482926.51	E.= 650078.15
B	- N.=	482843.55	E.= 611551.11	B	- N.=	482903.35	E.= 652733.95
C	- N.=	482842.66	E.= 614207.45	C	- N.=	482902.46	E.= 655390.29
D	- N.=	480187.61	E.= 614219.66	D	- N.=	480247.35	E.= 655402.59
E	- N.=	477533.21	E.= 614231.45	E	- N.=	477592.89	E.= 655414.45
F	- N.=	474873.91	E.= 614245.79	F	- N.=	474933.53	E.= 655428.87
G	- N.=	472214.62	E.= 614260.13	G	- N.=	472274.17	E.= 655443.28
H	- N.=	469557.73	E.= 614281.05	H	- N.=	469617.22	E.= 655464.27
I	- N.=	466902.03	E.= 614301.68	I	- N.=	466961.45	E.= 655484.98
J	- N.=	466900.23	E.= 611638.47	J	- N.=	466959.66	E.= 652821.76
K	- N.=	466891.79	E.= 608970.54	K	- N.=	466951.21	E.= 650153.82
L	- N.=	469547.63	E.= 608964.85	L	- N.=	469607.12	E.= 650147.87
M	- N.=	472203.48	E.= 608958.77	M	- N.=	472263.03	E.= 650141.91
N	- N.=	474867.89	E.= 608960.63	N	- N.=	474927.51	E.= 650143.69
O	- N.=	477524.80	E.= 608962.48	O	- N.=	477584.48	E.= 650145.47
P	- N.=	480195.76	E.= 608928.90	P	- N.=	480255.49	E.= 650111.81
Q	- N.=	477528.99	E.= 611596.38	Q	- N.=	477588.67	E.= 652779.37
R	- N.=	472210.86	E.= 611608.93	R	- N.=	472270.41	E.= 652792.00



NOVO Oil & Gas

EDDY CO., NM (NAD83)

SEC 22-T23S-R29E

Cassius Fed Com 1510 234H

SideTrack 1

Design: FINAL SURVEYS

Standard Survey Report

02 August, 2022





Survey Report



Company:	NOVO Oil & Gas	Local Co-ordinate Reference:	Well Cassius Fed Com 1510 234H
Project:	EDDY CO., NM (NAD83)	TVD Reference:	RKB 26.5'+ GL @ 3023.50usft
Site:	SEC 22-T23S-R29E	MD Reference:	RKB 26.5'+ GL @ 3023.50usft
Well:	Cassius Fed Com 1510 234H	North Reference:	Grid
Wellbore:	SideTrack 1	Survey Calculation Method:	Minimum Curvature
Design:	FINAL SURVEYS	Database:	1 - EDM Production

Project	EDDY CO., NM (NAD83)		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site	SEC 22-T23S-R29E		
Site Position:		Northing:	472,158.88 usft
From:	Map	Easting:	653,466.11 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "
		Latitude:	32.29751668
		Longitude:	-103.97043856

Well	Cassius Fed Com 1510 234H		
Well Position	+N/-S	0.00 usft	Northing: 472,159.10 usft
	+E/-W	0.00 usft	Easting: 653,526.18 usft
Position Uncertainty	0.50 usft	Wellhead Elevation:	usft
Grid Convergence:	0.19 °	Ground Level:	2,997.00 usft

Wellbore	SideTrack 1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2020	7/12/2022	6.61	59.87	47,387.44417709

Design	FINAL SURVEYS				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.00	0.00	0.00	0.00	

Survey Program	Date	8/2/2022			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
183.50	430.50	MWD Grid North (SideTrack 1)	MWD+IGRF	OWSG MWD + IGRF or WMM	
498.00	17,249.00	Survey #2 (SideTrack 1)	MWD+IFR1+MS	OWSG MWD + IFR1 + Multi-Station Correction	
16,778.00	21,979.00	Survey #1 (SideTrack 1)	MWD+IFR1+MS	OWSG MWD + IFR1 + Multi-Station Correction	

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
183.50	1.10	353.43	183.49	1.75	-0.20	1.75	0.60	0.60	0.00	
300.50	0.97	8.11	300.47	3.85	-0.19	3.85	0.25	-0.11	12.55	
390.50	0.53	30.79	390.46	4.96	0.13	4.96	0.58	-0.49	25.20	
430.50	0.53	30.79	430.46	5.28	0.32	5.28	0.00	0.00	0.00	
498.00	0.49	90.60	497.96	5.54	0.77	5.54	0.76	-0.06	88.61	
589.00	0.29	89.04	588.96	5.54	1.39	5.54	0.22	-0.22	-1.71	
680.00	0.65	122.73	679.95	5.27	2.05	5.27	0.48	0.40	37.02	



Survey Report



Company:	NOVO Oil & Gas	Local Co-ordinate Reference:	Well Cassius Fed Com 1510 234H
Project:	EDDY CO., NM (NAD83)	TVD Reference:	RKB 26.5'+ GL @ 3023.50usft
Site:	SEC 22-T23S-R29E	MD Reference:	RKB 26.5'+ GL @ 3023.50usft
Well:	Cassius Fed Com 1510 234H	North Reference:	Grid
Wellbore:	SideTrack 1	Survey Calculation Method:	Minimum Curvature
Design:	FINAL SURVEYS	Database:	1 - EDM Production

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
771.00	0.75	132.47	770.95	4.58	2.93	4.58	0.17	0.11	10.70
863.00	0.88	114.84	862.94	3.88	4.01	3.88	0.31	0.14	-19.16
954.00	1.03	142.49	953.92	2.94	5.14	2.94	0.53	0.16	30.38
1,046.00	1.16	147.30	1,045.91	1.50	6.15	1.50	0.17	0.14	5.23
1,137.00	1.12	173.57	1,136.89	-0.16	6.75	-0.16	0.57	-0.04	28.87
1,228.00	1.50	114.94	1,227.87	-1.55	7.93	-1.55	1.46	0.42	-64.43
1,319.00	3.33	83.11	1,318.79	-1.73	11.63	-1.73	2.42	2.01	-34.98
1,411.00	5.86	71.92	1,410.49	0.05	18.75	0.05	2.90	2.75	-12.16
1,505.00	8.58	62.49	1,503.74	4.78	29.53	4.78	3.15	2.89	-10.03
1,599.00	11.17	54.17	1,596.34	13.35	43.14	13.35	3.14	2.76	-8.85
1,694.00	13.16	52.14	1,689.20	25.37	59.14	25.37	2.14	2.09	-2.14
1,788.00	13.08	51.65	1,780.75	38.54	75.93	38.54	0.15	-0.09	-0.52
1,882.00	11.39	55.33	1,872.61	50.42	91.90	50.42	1.98	-1.80	3.91
1,976.00	9.36	66.66	1,965.08	58.73	106.56	58.73	3.05	-2.16	12.05
2,070.00	9.10	85.52	2,057.88	62.34	120.99	62.34	3.22	-0.28	20.06
2,165.00	9.47	104.57	2,151.66	60.96	136.05	60.96	3.24	0.39	20.05
2,259.00	11.51	112.27	2,244.09	55.46	152.21	55.46	2.63	2.17	8.19
2,354.00	12.47	113.29	2,337.02	47.81	170.41	47.81	1.03	1.01	1.07
2,449.00	13.12	114.55	2,429.66	39.28	189.63	39.28	0.74	0.68	1.33
2,543.00	15.35	116.22	2,520.77	29.35	210.50	29.35	2.41	2.37	1.78
2,637.00	16.27	115.69	2,611.21	18.14	233.53	18.14	0.99	0.98	-0.56
2,731.00	15.38	114.80	2,701.65	7.20	256.71	7.20	0.98	-0.95	-0.95
2,825.00	16.20	114.59	2,792.10	-3.48	279.95	-3.48	0.87	0.87	-0.22
2,919.00	18.14	115.77	2,881.91	-15.30	305.06	-15.30	2.10	2.06	1.26
2,957.00	18.85	115.48	2,917.94	-20.51	315.93	-20.51	1.88	1.87	-0.76
3,014.00	19.67	114.42	2,971.75	-28.44	332.97	-28.44	1.56	1.44	-1.86
3,108.00	18.59	107.68	3,060.57	-39.53	361.66	-39.53	2.61	-1.15	-7.17
3,203.00	18.21	105.63	3,150.71	-48.13	390.38	-48.13	0.79	-0.40	-2.16
3,298.00	18.37	103.98	3,240.92	-55.75	419.20	-55.75	0.57	0.17	-1.74
3,392.00	17.61	102.96	3,330.32	-62.52	447.43	-62.52	0.88	-0.81	-1.09
3,487.00	17.38	101.44	3,420.93	-68.55	475.34	-68.55	0.54	-0.24	-1.60
3,581.00	17.21	100.07	3,510.68	-73.77	502.80	-73.77	0.47	-0.18	-1.46
3,676.00	17.16	98.73	3,601.44	-78.35	530.49	-78.35	0.42	-0.05	-1.41
3,770.00	17.09	101.91	3,691.27	-83.31	557.71	-83.31	1.00	-0.07	3.38
3,864.00	17.30	102.20	3,781.07	-89.11	584.88	-89.11	0.24	0.22	0.31
3,959.00	15.46	104.76	3,872.21	-95.32	610.94	-95.32	2.08	-1.94	2.69
4,053.00	14.76	106.28	3,962.96	-101.87	634.55	-101.87	0.86	-0.74	1.62
4,147.00	14.66	105.15	4,053.88	-108.34	657.52	-108.34	0.32	-0.11	-1.20
4,242.00	14.69	103.62	4,145.78	-114.32	680.83	-114.32	0.41	0.03	-1.61
4,336.00	14.95	101.93	4,236.65	-119.63	704.28	-119.63	0.54	0.28	-1.80
4,430.00	15.17	100.15	4,327.43	-124.30	728.25	-124.30	0.54	0.23	-1.89
4,524.00	14.73	105.70	4,418.25	-129.71	751.86	-129.71	1.59	-0.47	5.90
4,618.00	15.23	109.19	4,509.06	-137.00	775.03	-137.00	1.10	0.53	3.71



Survey Report



Company:	NOVO Oil & Gas	Local Co-ordinate Reference:	Well Cassius Fed Com 1510 234H
Project:	EDDY CO., NM (NAD83)	TVD Reference:	RKB 26.5'+ GL @ 3023.50usft
Site:	SEC 22-T23S-R29E	MD Reference:	RKB 26.5'+ GL @ 3023.50usft
Well:	Cassius Fed Com 1510 234H	North Reference:	Grid
Wellbore:	SideTrack 1	Survey Calculation Method:	Minimum Curvature
Design:	FINAL SURVEYS	Database:	1 - EDM Production

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
4,713.00	14.61	108.10	4,600.85	-144.82	798.20	-144.82	0.72	-0.65	-1.15
4,808.00	14.58	107.11	4,692.79	-152.06	821.02	-152.06	0.26	-0.03	-1.04
4,902.00	14.34	111.64	4,783.81	-159.84	843.15	-159.84	1.23	-0.26	4.82
4,996.00	14.34	114.03	4,874.88	-168.87	864.60	-168.87	0.63	0.00	2.54
5,091.00	14.57	112.02	4,966.88	-178.14	886.42	-178.14	0.58	0.24	-2.12
5,185.00	14.61	110.02	5,057.85	-186.63	908.52	-186.63	0.54	0.04	-2.13
5,279.00	14.29	107.91	5,148.87	-194.26	930.70	-194.26	0.66	-0.34	-2.24
5,374.00	15.17	110.23	5,240.75	-202.16	953.52	-202.16	1.12	0.93	2.44
5,468.00	15.42	110.39	5,331.42	-210.77	976.77	-210.77	0.27	0.27	0.17
5,563.00	14.96	109.62	5,423.10	-219.29	1,000.16	-219.29	0.53	-0.48	-0.81
5,657.00	13.93	108.35	5,514.13	-226.92	1,022.33	-226.92	1.15	-1.10	-1.35
5,752.00	14.86	111.66	5,606.15	-235.02	1,044.51	-235.02	1.31	0.98	3.48
5,847.00	15.31	112.74	5,697.87	-244.36	1,067.40	-244.36	0.56	0.47	1.14
5,941.00	15.68	112.39	5,788.46	-254.00	1,090.59	-254.00	0.41	0.39	-0.37
6,036.00	15.14	112.68	5,880.04	-263.67	1,113.90	-263.67	0.57	-0.57	0.31
6,130.00	16.46	112.45	5,970.49	-273.49	1,137.54	-273.49	1.41	1.40	-0.24
6,224.00	16.56	112.19	6,060.61	-283.64	1,162.25	-283.64	0.13	0.11	-0.28
6,319.00	16.31	111.24	6,151.73	-293.58	1,187.22	-293.58	0.39	-0.26	-1.00
6,414.00	16.10	110.81	6,242.96	-303.09	1,211.96	-303.09	0.25	-0.22	-0.45
6,508.00	15.15	109.84	6,333.48	-311.89	1,235.70	-311.89	1.05	-1.01	-1.03
6,603.00	14.57	109.30	6,425.30	-320.06	1,258.66	-320.06	0.63	-0.61	-0.57
6,698.00	13.71	108.38	6,517.43	-327.56	1,280.62	-327.56	0.94	-0.91	-0.97
6,793.00	11.05	110.93	6,610.21	-334.36	1,299.81	-334.36	2.86	-2.80	2.68
6,887.00	8.57	112.06	6,702.83	-340.21	1,314.72	-340.21	2.65	-2.64	1.20
6,982.00	6.66	112.86	6,796.99	-345.01	1,326.36	-345.01	2.01	-2.01	0.84
7,076.00	3.06	122.70	6,890.63	-348.48	1,333.49	-348.48	3.92	-3.83	10.47
7,171.00	2.05	128.57	6,985.54	-350.91	1,336.95	-350.91	1.10	-1.06	6.18
7,266.00	0.79	125.85	7,080.51	-352.35	1,338.81	-352.35	1.33	-1.33	-2.86
7,361.00	0.33	151.61	7,175.50	-352.98	1,339.47	-352.98	0.54	-0.48	27.12
7,455.00	0.55	151.18	7,269.50	-353.61	1,339.82	-353.61	0.23	0.23	-0.46
7,550.00	0.50	116.32	7,364.50	-354.20	1,340.41	-354.20	0.33	-0.05	-36.69
7,644.00	0.64	96.51	7,458.49	-354.44	1,341.30	-354.44	0.26	0.15	-21.07
7,738.00	0.50	100.03	7,552.49	-354.57	1,342.23	-354.57	0.15	-0.15	3.74
7,833.00	0.26	74.42	7,647.48	-354.58	1,342.84	-354.58	0.30	-0.25	-26.96
7,927.00	0.30	101.36	7,741.48	-354.57	1,343.29	-354.57	0.14	0.04	28.66
8,021.00	0.37	183.54	7,835.48	-354.92	1,343.51	-354.92	0.47	0.07	87.43
8,116.00	0.57	229.32	7,930.48	-355.54	1,343.13	-355.54	0.43	0.21	48.19
8,211.00	0.91	244.04	8,025.47	-356.18	1,342.10	-356.18	0.41	0.36	15.49
8,305.00	0.79	230.32	8,119.46	-356.92	1,340.93	-356.92	0.25	-0.13	-14.60
8,399.00	0.90	180.96	8,213.45	-358.07	1,340.42	-358.07	0.76	0.12	-52.51
8,494.00	1.11	177.78	8,308.44	-359.74	1,340.44	-359.74	0.23	0.22	-3.35
8,588.00	1.91	202.61	8,402.40	-362.09	1,339.87	-362.09	1.08	0.85	26.41
8,682.00	2.39	192.17	8,496.34	-365.45	1,338.86	-365.45	0.66	0.51	-11.11
8,776.00	2.25	172.58	8,590.26	-369.20	1,338.68	-369.20	0.85	-0.15	-20.84



Survey Report



Company:	NOVO Oil & Gas	Local Co-ordinate Reference:	Well Cassius Fed Com 1510 234H
Project:	EDDY CO., NM (NAD83)	TVD Reference:	RKB 26.5'+ GL @ 3023.50usft
Site:	SEC 22-T23S-R29E	MD Reference:	RKB 26.5'+ GL @ 3023.50usft
Well:	Cassius Fed Com 1510 234H	North Reference:	Grid
Wellbore:	SideTrack 1	Survey Calculation Method:	Minimum Curvature
Design:	FINAL SURVEYS	Database:	1 - EDM Production

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
8,871.00	1.47	164.31	8,685.21	-372.22	1,339.25	-372.22	0.87	-0.82	-8.71
8,966.00	1.39	137.56	8,780.18	-374.24	1,340.36	-374.24	0.70	-0.08	-28.16
9,060.00	1.80	137.24	8,874.15	-376.17	1,342.13	-376.17	0.44	0.44	-0.34
9,154.00	1.44	116.45	8,968.11	-377.78	1,344.19	-377.78	0.73	-0.38	-22.12
9,249.00	2.46	133.18	9,063.05	-379.71	1,346.75	-379.71	1.22	1.07	17.61
9,343.00	2.15	132.00	9,156.98	-382.27	1,349.53	-382.27	0.33	-0.33	-1.26
9,437.00	0.98	125.86	9,250.94	-383.92	1,351.49	-383.92	1.26	-1.24	-6.53
9,533.00	0.46	305.39	9,346.94	-384.18	1,351.84	-384.18	1.50	-0.54	187.01
9,627.00	0.98	305.33	9,440.93	-383.49	1,350.88	-383.49	0.55	0.55	-0.06
9,722.00	1.20	286.85	9,535.91	-382.73	1,349.26	-382.73	0.43	0.23	-19.45
9,816.00	1.39	276.50	9,629.89	-382.32	1,347.19	-382.32	0.32	0.20	-11.01
9,910.00	2.28	272.05	9,723.84	-382.12	1,344.19	-382.12	0.96	0.95	-4.73
10,005.00	1.67	287.59	9,818.78	-381.64	1,340.98	-381.64	0.85	-0.64	16.36
10,100.00	1.40	294.78	9,913.75	-380.73	1,338.61	-380.73	0.35	-0.28	7.57
10,194.00	1.52	295.59	10,007.72	-379.71	1,336.44	-379.71	0.13	0.13	0.86
10,289.00	1.65	292.51	10,102.68	-378.65	1,334.04	-378.65	0.16	0.14	-3.24
10,383.00	1.50	292.07	10,196.65	-377.67	1,331.65	-377.67	0.16	-0.16	-0.47
10,478.00	1.50	286.95	10,291.62	-376.84	1,329.31	-376.84	0.14	0.00	-5.39
10,572.00	1.61	278.72	10,385.58	-376.28	1,326.82	-376.28	0.26	0.12	-8.76
10,596.00	1.47	275.93	10,409.57	-376.19	1,326.19	-376.19	0.66	-0.58	-11.63
10,728.00	3.40	328.57	10,541.46	-372.68	1,322.46	-372.68	2.10	1.46	39.88
KOP: 10728.00'MD 10541.46'TVD									
10,822.00	16.47	15.54	10,633.93	-357.38	1,324.59	-357.38	15.28	13.90	49.97
10,917.00	26.49	7.23	10,722.24	-323.29	1,330.88	-323.29	11.00	10.55	-8.75
11,012.00	37.32	5.50	10,802.77	-273.46	1,336.32	-273.46	11.44	11.40	-1.82
11,106.00	52.66	10.31	10,869.07	-207.92	1,345.80	-207.92	16.71	16.32	5.12
11,200.00	61.85	9.09	10,919.86	-130.07	1,359.06	-130.07	9.84	9.78	-1.30
11,295.00	69.82	7.81	10,958.72	-44.40	1,371.76	-44.40	8.48	8.39	-1.35
11,391.00	76.43	8.47	10,986.58	46.49	1,384.77	46.49	6.92	6.89	0.69
11,460.00	83.32	8.40	10,998.70	113.64	1,394.73	113.64	9.98	9.98	-0.10
X SEC: 11460.00'MD 10998.70'TVD (0' FSL 517' FEL)									
11,485.00	85.81	8.38	11,001.07	138.25	1,398.36	138.25	9.98	9.98	-0.09
11,579.00	86.05	5.76	11,007.74	231.30	1,409.90	231.30	2.79	0.26	-2.79
11,674.00	88.91	7.32	11,011.92	325.57	1,420.71	325.57	3.43	3.01	1.64
11,768.00	90.34	9.37	11,012.53	418.57	1,434.35	418.57	2.66	1.52	2.18
11,793.00	90.57	10.16	11,012.34	443.21	1,438.59	443.21	3.30	0.94	3.17
X 330' FSL: 11793.00'MD 11012.34'TVD (330' FSL 471' FEL)									
11,863.00	91.23	12.38	11,011.23	511.84	1,452.27	511.84	3.30	0.94	3.17
11,957.00	92.24	13.80	11,008.39	603.36	1,473.55	603.36	1.85	1.07	1.51
12,051.00	90.67	11.43	11,006.00	695.05	1,494.07	695.05	3.02	-1.67	-2.52
12,146.00	89.19	10.51	11,006.12	788.31	1,512.15	788.31	1.83	-1.56	-0.97
12,240.00	89.05	10.11	11,007.56	880.78	1,528.97	880.78	0.45	-0.15	-0.43
12,335.00	89.86	8.91	11,008.46	974.47	1,544.66	974.47	1.52	0.85	-1.26



Survey Report



Company:	NOVO Oil & Gas	Local Co-ordinate Reference:	Well Cassius Fed Com 1510 234H
Project:	EDDY CO., NM (NAD83)	TVD Reference:	RKB 26.5'+ GL @ 3023.50usft
Site:	SEC 22-T23S-R29E	MD Reference:	RKB 26.5'+ GL @ 3023.50usft
Well:	Cassius Fed Com 1510 234H	North Reference:	Grid
Wellbore:	SideTrack 1	Survey Calculation Method:	Minimum Curvature
Design:	FINAL SURVEYS	Database:	1 - EDM Production

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
12,429.00	89.50	6.51	11,008.99	1,067.61	1,557.27	1,067.61	2.58	-0.38	-2.55
12,523.00	89.75	5.51	11,009.60	1,161.09	1,567.11	1,161.09	1.10	0.27	-1.06
12,617.00	90.08	2.69	11,009.74	1,254.84	1,573.83	1,254.84	3.02	0.35	-3.00
12,712.00	91.29	2.53	11,008.61	1,349.73	1,578.16	1,349.73	1.28	1.27	-0.17
12,806.00	91.54	0.65	11,006.29	1,443.66	1,580.77	1,443.66	2.02	0.27	-2.00
12,901.00	89.13	359.00	11,005.73	1,538.65	1,580.48	1,538.65	3.07	-2.54	-1.74
12,995.00	88.68	359.00	11,007.53	1,632.62	1,578.84	1,632.62	0.48	-0.48	0.00
13,090.00	90.98	0.23	11,007.81	1,727.61	1,578.20	1,727.61	2.75	2.42	1.29
13,184.00	91.93	0.57	11,005.42	1,821.57	1,578.85	1,821.57	1.07	1.01	0.36
13,279.00	92.66	359.29	11,001.62	1,916.49	1,578.74	1,916.49	1.55	0.77	-1.35
13,374.00	91.34	357.23	10,998.30	2,011.39	1,575.85	2,011.39	2.57	-1.39	-2.17
13,468.00	90.28	357.52	10,996.97	2,105.28	1,571.55	2,105.28	1.17	-1.13	0.31
13,563.00	89.47	357.31	10,997.18	2,200.18	1,567.27	2,200.18	0.88	-0.85	-0.22
13,658.00	89.86	357.04	10,997.74	2,295.06	1,562.58	2,295.06	0.50	0.41	-0.28
13,753.00	90.17	356.77	10,997.71	2,389.92	1,557.45	2,389.92	0.43	0.33	-0.28
13,848.00	90.53	356.43	10,997.13	2,484.75	1,551.82	2,484.75	0.52	0.38	-0.36
13,943.00	91.23	359.48	10,995.67	2,579.67	1,548.43	2,579.67	3.29	0.74	3.21
14,037.00	89.02	359.57	10,995.47	2,673.66	1,547.65	2,673.66	2.35	-2.35	0.10
14,132.00	88.63	359.60	10,997.41	2,768.64	1,546.96	2,768.64	0.41	-0.41	0.03
14,227.00	87.93	359.74	11,000.27	2,863.59	1,546.42	2,863.59	0.75	-0.74	0.15
14,321.00	87.20	357.20	11,004.26	2,957.47	1,543.91	2,957.47	2.81	-0.78	-2.70
14,415.00	90.39	358.97	11,006.24	3,051.38	1,540.77	3,051.38	3.88	3.39	1.88
14,510.00	93.50	1.34	11,003.01	3,146.30	1,541.03	3,146.30	4.11	3.27	2.49
14,605.00	91.57	1.21	10,998.81	3,241.18	1,543.14	3,241.18	2.04	-2.03	-0.14
14,700.00	92.32	1.61	10,995.59	3,336.10	1,545.47	3,336.10	0.89	0.79	0.42
14,794.00	91.46	2.48	10,992.49	3,429.98	1,548.83	3,429.98	1.30	-0.91	0.93
14,888.00	86.55	2.26	10,994.12	3,523.86	1,552.71	3,523.86	5.23	-5.22	-0.23
14,983.00	85.63	359.52	11,000.60	3,618.62	1,554.18	3,618.62	3.04	-0.97	-2.88
15,077.00	88.09	357.94	11,005.75	3,712.44	1,552.10	3,712.44	3.11	2.62	-1.68
15,170.00	87.28	357.10	11,009.50	3,805.28	1,548.08	3,805.28	1.25	-0.87	-0.90
15,265.00	88.96	357.39	11,012.62	3,900.12	1,543.52	3,900.12	1.79	1.77	0.31
15,360.00	92.07	357.66	11,011.77	3,995.01	1,539.42	3,995.01	3.29	3.27	0.28
15,454.00	90.28	1.86	11,009.84	4,088.97	1,539.02	4,088.97	4.86	-1.90	4.47
15,549.00	91.03	7.97	11,008.75	4,183.56	1,547.16	4,183.56	6.48	0.79	6.43
15,643.00	89.36	5.49	11,008.43	4,276.91	1,558.17	4,276.91	3.18	-1.78	-2.64
15,738.00	89.08	2.89	11,009.72	4,371.64	1,565.11	4,371.64	2.75	-0.29	-2.74
15,833.00	90.45	359.87	11,010.11	4,466.59	1,567.40	4,466.59	3.49	1.44	-3.18
15,927.00	89.54	358.52	11,010.12	4,560.58	1,566.08	4,560.58	1.73	-0.97	-1.44
16,022.00	90.42	359.09	11,010.15	4,655.56	1,564.10	4,655.56	1.10	0.93	0.60
16,116.00	91.20	359.47	11,008.83	4,749.54	1,562.92	4,749.54	0.92	0.83	0.40
16,211.00	88.80	358.82	11,008.83	4,844.52	1,561.50	4,844.52	2.62	-2.53	-0.68
16,305.00	91.62	0.64	11,008.48	4,938.51	1,561.06	4,938.51	3.57	3.00	1.94
16,399.00	89.24	359.40	11,007.78	5,032.50	1,561.09	5,032.50	2.85	-2.53	-1.32
16,495.00	87.12	358.99	11,010.82	5,128.43	1,559.74	5,128.43	2.25	-2.21	-0.43



Survey Report



Company:	NOVO Oil & Gas	Local Co-ordinate Reference:	Well Cassius Fed Com 1510 234H
Project:	EDDY CO., NM (NAD83)	TVD Reference:	RKB 26.5'+ GL @ 3023.50usft
Site:	SEC 22-T23S-R29E	MD Reference:	RKB 26.5'+ GL @ 3023.50usft
Well:	Cassius Fed Com 1510 234H	North Reference:	Grid
Wellbore:	SideTrack 1	Survey Calculation Method:	Minimum Curvature
Design:	FINAL SURVEYS	Database:	1 - EDM Production

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
16,589.00	85.83	358.47	11,016.60	5,222.23	1,557.66	5,222.23	1.48	-1.37	-0.55
16,683.00	85.40	358.43	11,023.79	5,315.92	1,555.13	5,315.92	0.46	-0.46	-0.04
16,778.00	80.97	355.52	11,035.06	5,410.08	1,550.16	5,410.08	5.57	-4.66	-3.06
16,800.00	81.37	354.83	11,038.44	5,431.75	1,548.33	5,431.75	3.59	1.80	-3.15
X SEC: 16800.00'MD 11038.44'TVD (0' FSL 340' FEL)									
16,872.00	82.67	352.57	11,048.44	5,502.61	1,540.51	5,502.61	3.59	1.81	-3.14
16,967.00	85.40	352.56	11,058.31	5,596.29	1,528.28	5,596.29	2.87	2.87	-0.01
17,061.00	86.13	354.23	11,065.25	5,689.41	1,517.50	5,689.41	1.93	0.78	1.78
17,155.00	88.10	355.63	11,069.99	5,782.92	1,509.20	5,782.92	2.57	2.10	1.49
17,249.00	90.08	357.21	11,071.48	5,876.71	1,503.34	5,876.71	2.69	2.11	1.68
17,344.00	91.93	359.09	11,069.81	5,971.64	1,500.27	5,971.64	2.78	1.95	1.98
17,439.00	92.30	359.40	11,066.31	6,066.57	1,499.02	6,066.57	0.51	0.39	0.33
17,533.00	92.35	359.18	11,062.49	6,160.48	1,497.86	6,160.48	0.24	0.05	-0.23
17,627.00	92.21	0.15	11,058.75	6,254.41	1,497.31	6,254.41	1.04	-0.15	1.03
17,721.00	93.59	2.85	11,054.00	6,348.24	1,499.76	6,348.24	3.22	1.47	2.87
17,816.00	94.51	2.90	11,047.29	6,442.89	1,504.51	6,442.89	0.97	0.97	0.05
17,911.00	93.00	2.09	11,041.07	6,537.59	1,508.64	6,537.59	1.80	-1.59	-0.85
18,005.00	92.77	2.41	11,036.33	6,631.40	1,512.33	6,631.40	0.42	-0.24	0.34
18,099.00	91.20	1.96	11,033.08	6,725.27	1,515.91	6,725.27	1.74	-1.67	-0.48
18,194.00	90.17	0.82	11,031.94	6,820.23	1,518.21	6,820.23	1.62	-1.08	-1.20
18,289.00	90.11	1.51	11,031.71	6,915.21	1,520.14	6,915.21	0.73	-0.06	0.73
18,383.00	89.94	0.86	11,031.67	7,009.19	1,522.09	7,009.19	0.71	-0.18	-0.69
18,477.00	93.39	3.87	11,028.94	7,103.05	1,525.96	7,103.05	4.87	3.67	3.20
18,572.00	91.57	2.48	11,024.83	7,197.81	1,531.22	7,197.81	2.41	-1.92	-1.46
18,666.00	89.72	0.23	11,023.77	7,291.76	1,533.44	7,291.76	3.10	-1.97	-2.39
18,761.00	88.74	1.21	11,025.05	7,386.74	1,534.63	7,386.74	1.46	-1.03	1.03
18,855.00	88.26	0.15	11,027.51	7,480.70	1,535.75	7,480.70	1.24	-0.51	-1.13
18,950.00	88.46	359.04	11,030.23	7,575.66	1,535.08	7,575.66	1.19	0.21	-1.17
19,044.00	88.80	359.07	11,032.47	7,669.62	1,533.53	7,669.62	0.36	0.36	0.03
19,139.00	89.08	358.89	11,034.23	7,764.59	1,531.84	7,764.59	0.35	0.29	-0.19
19,234.00	89.02	358.66	11,035.81	7,859.56	1,529.81	7,859.56	0.25	-0.06	-0.24
19,328.00	88.85	358.36	11,037.55	7,953.51	1,527.36	7,953.51	0.37	-0.18	-0.32
19,422.00	88.29	357.65	11,039.90	8,047.42	1,524.09	8,047.42	0.96	-0.60	-0.76
19,517.00	87.96	357.95	11,043.01	8,142.30	1,520.45	8,142.30	0.47	-0.35	0.32
19,611.00	87.67	357.52	11,046.59	8,236.16	1,516.73	8,236.16	0.55	-0.31	-0.46
19,705.00	89.52	359.29	11,048.90	8,330.08	1,514.12	8,330.08	2.72	1.97	1.88
19,799.00	91.88	0.29	11,047.75	8,424.07	1,513.77	8,424.07	2.73	2.51	1.06
19,894.00	91.51	0.31	11,044.94	8,519.03	1,514.27	8,519.03	0.39	-0.39	0.02
19,988.00	86.83	1.52	11,046.30	8,612.98	1,515.77	8,612.98	5.14	-4.98	1.29
20,082.00	91.46	2.15	11,047.70	8,706.89	1,518.78	8,706.89	4.97	4.93	0.67
20,176.00	90.90	0.55	11,045.76	8,800.84	1,520.99	8,800.84	1.80	-0.60	-1.70
20,270.00	91.65	0.75	11,043.67	8,894.81	1,522.06	8,894.81	0.83	0.80	0.21
20,365.00	94.46	2.03	11,038.61	8,989.64	1,524.36	8,989.64	3.25	2.96	1.35



Survey Report



Company:	NOVO Oil & Gas	Local Co-ordinate Reference:	Well Cassius Fed Com 1510 234H
Project:	EDDY CO., NM (NAD83)	TVD Reference:	RKB 26.5'+ GL @ 3023.50usft
Site:	SEC 22-T23S-R29E	MD Reference:	RKB 26.5'+ GL @ 3023.50usft
Well:	Cassius Fed Com 1510 234H	North Reference:	Grid
Wellbore:	SideTrack 1	Survey Calculation Method:	Minimum Curvature
Design:	FINAL SURVEYS	Database:	1 - EDM Production

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
20,459.00	92.21	1.15	11,033.14	9,083.44	1,526.96	9,083.44	2.57	-2.39	-0.94	
20,553.00	91.09	0.78	11,030.44	9,177.38	1,528.54	9,177.38	1.25	-1.19	-0.39	
20,648.00	88.80	358.74	11,030.53	9,272.37	1,528.15	9,272.37	3.23	-2.41	-2.15	
20,742.00	89.13	359.62	11,032.22	9,366.34	1,526.80	9,366.34	1.00	0.35	0.94	
20,837.00	88.43	359.29	11,034.25	9,461.32	1,525.90	9,461.32	0.81	-0.74	-0.35	
20,931.00	87.65	358.92	11,037.46	9,555.25	1,524.43	9,555.25	0.92	-0.83	-0.39	
21,025.00	87.95	358.85	11,041.07	9,649.16	1,522.60	9,649.16	0.33	0.32	-0.07	
21,120.00	86.47	358.33	11,045.69	9,744.02	1,520.27	9,744.02	1.65	-1.56	-0.55	
21,215.00	85.60	357.77	11,052.26	9,838.73	1,517.04	9,838.73	1.09	-0.92	-0.59	
21,311.00	86.02	358.13	11,059.28	9,934.42	1,513.62	9,934.42	0.58	0.44	0.38	
21,406.00	85.99	357.47	11,065.90	10,029.11	1,509.98	10,029.11	0.69	-0.03	-0.69	
21,499.00	84.59	356.98	11,073.53	10,121.69	1,505.49	10,121.69	1.59	-1.51	-0.53	
21,594.00	84.48	356.82	11,082.58	10,216.12	1,500.38	10,216.12	0.20	-0.12	-0.17	
21,688.00	83.40	356.87	11,092.50	10,309.45	1,495.24	10,309.45	1.15	-1.15	0.05	
21,782.00	82.13	356.52	11,104.34	10,402.55	1,489.86	10,402.55	1.40	-1.35	-0.37	
21,792.00	82.06	356.45	11,105.72	10,412.43	1,489.25	10,412.43	0.96	-0.66	-0.70	
X SEC: 21792.00°MD 11105.72°TVD (330° FNL 380° FEL)										
21,876.00	81.51	355.86	11,117.72	10,495.38	1,483.68	10,495.38	0.96	-0.66	-0.70	
21,921.00	80.89	355.61	11,124.60	10,539.73	1,480.37	10,539.73	1.48	-1.38	-0.56	
LS: 21921.00°MD 11124.60°TVD										
21,979.00	80.89	355.61	11,133.78	10,596.83	1,475.99	10,596.83	0.00	0.00	0.00	
PTD: 21979.00°MD 11133.78°TVD (145° FNL 390° FEL)										

Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude	
- hit/miss target										
- Shape										
Cassius 234H LTP (330'	0.00	0.00	11,036.00	10,413.49	1,535.66	482,572.59	655,061.84	32.32612706	-103.96515844	
- actual wellpath misses target center by 82.99usft at 21781.61usft MD (11104.29 TVD, 10402.16 N, 1489.88 E)										
- Point										
Cassius 234H PBHL (13	0.00	0.00	11,037.00	10,613.55	1,534.72	482,772.65	655,060.90	32.32667699	-103.96515926	
- actual wellpath misses target center by 114.39usft at 21975.70usft MD (11133.26 TVD, 10593.58 N, 1476.24 E)										
- Point										



Survey Report



Company:	NOVO Oil & Gas	Local Co-ordinate Reference:	Well Cassius Fed Com 1510 234H
Project:	EDDY CO., NM (NAD83)	TVD Reference:	RKB 26.5'+ GL @ 3023.50usft
Site:	SEC 22-T23S-R29E	MD Reference:	RKB 26.5'+ GL @ 3023.50usft
Well:	Cassius Fed Com 1510 234H	North Reference:	Grid
Wellbore:	SideTrack 1	Survey Calculation Method:	Minimum Curvature
Design:	FINAL SURVEYS	Database:	1 - EDM Production

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
10,728.00	10,541.46	-372.68	1,322.46	KOP: 10728.00'MD 10541.46'TVD
11,460.00	10,998.70	113.64	1,394.73	X SEC: 11460.00'MD 10998.70'TVD (0' FSL 517' FEL)
11,793.00	11,012.34	443.21	1,438.59	X 330' FSL: 11793.00'MD 11012.34'TVD (330' FSL 471' FEL)
16,800.00	11,038.44	5,431.75	1,548.33	X SEC: 16800.00'MD 11038.44'TVD (0' FSL 340' FEL)
21,792.00	11,105.72	10,412.43	1,489.25	X SEC: 21792.00'MD 11105.72'TVD (330' FNL 380' FEL)
21,921.00	11,124.60	10,539.73	1,480.37	LS: 21921.00'MD 11124.60'TVD
21,979.00	11,133.78	10,596.83	1,475.99	PTD: 21979.00'MD 11133.78'TVD (145' FNL 390' FEL)

Checked By: _____ Approved By: _____ Date: _____

C-105 Submit Electronically Via OCD Permitting	State of New Mexico Energy, Minerals & Natural Resources Department OIL CONSERVATION DIVISION	Revised July 9, 2024
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WELL COMPLETION OR RECOMPLETION REPORT AND LOG

Section 1 - Operator and Well Information

Submittal Type: ☒ New Well ☐ Workover ☐ Deepening ☐ Plugback ☐ Different Reservoir ☐ C-144 Closure Attachment ☐ Other	
Operator Name: NOVO OIL & GAS NORTHERN DELAWARE, LLC	OGRID: 372920
Property Name and Well Number: CASSIUS FED COM 1510 234H	Property Code: 332260
Mineral Owner: ☐ State ☐ Fee ☐ Tribal ☒ Federal	API Number: 30-015-49374
Pool Name: Purple Sage; Wolfcamp	Pool Code: 98220

Section 2 – Well Location

	UI or lot no.	Section	Township	Range	Lot Id	Feet from	N/S Line	Feet from	E/W Line	County
SHL:	B	22	23 S	29 E		113	NORTH	1918	EAST	EDDY
BHL	A	10	23 S	29 E		149	NORTH	389	EAST	EDDY

Section 3 – Completion Information

Date T.D. Reached 7/18/2022	Total Measured Depth of Well 21,979	Acid Volume (bbls) N/A	☒ Directional Survey Submitted ☐ Deviation Survey Submitted
Date Rig Released 7/21/2022	Plug-Back Measured Depth 21,963’	Completion Fluid Used (bbls) 511,994.00	Were Logs Ran (Y/N) Y
Completion Date 5/22/2024	Perforations (MD and TVD) TVD FTP:11,808’ FTP: 11,012 LTP:21,779’ LTP: 11,100	Completion Proppant Used (lbs) 24,645,858	List Type of Logs Ran if applicable: Well Log

Section 4 – Action IDs for Submissions and Order Numbers

Surface Casing Action ID: 109177	UIC Permit/Order (UIC wells only) ☐ Yes ☒ No, Order No.
Intermediate 1 Casing Action ID: 137541	NOI Recomplete Action ID (if applicable): N/A
Intermediate 2 Casing Action ID: N/A	NOI Plugback Action ID (if applicable): N/A
Production Casing Action ID: 137541	Cement Squeeze Action ID (if applicable): N/A
Tubing Action ID: N/A	All casing was pressure tested in accordance with NMAC ☒ Yes ☐ No
Liner 1 Action ID: N/A	Casing was installed prior to Action ID system (Y/N): N

Section 5 – Test Data

Date First Production 5/22/2024	Production Method FLOWING	Well Status PRODUCING	Gas – Oil Ratio 7113
Date of Test 6/10/2024	Choke Size 0.469 IN	Flowing Tubing Pressure N/A	Casing Pressure 3450
24 hr Oil (bbls) 1060	24 hr Gas (MCF) 7541	24 hr Water (bbls) 2626	Oil Gravity - API 46.2
Disposition of Gas: SOLD			

Section 6 – Pits

☐ A temporary pit was used at the well. If so, attach a plat with the location of the temporary pit.
☐ A Closed Loop System was used.
☐ If an on-site burial was used at the well, report the exact location of the on-site burial: LAT: _____ LONG: _____

Section 7 - Operator Signature and Certification

☒ I hereby certify that the required Water Use Report has been, or will be, submitted for this well’s completion.	
☒ I hereby certify that the required Fracfocus disclosure has been, or will be, submitted for this well’s completion.	
☒ I hereby certify that the rules of the Oil Conservation Division have been complied with and that the information given above is true and complete to the best of my knowledge and belief.	
Name Jean A Cooper	Email: jean.cooper@permianres.com
Title <u>Regulatory Analyst</u>	Date 8/12/2024

South Formations				North Formations			
Formation/Zone	MD	TVD	W/O/G	Formation/Zone	MD	TVD	W/O/G
T. Anhy				T. San Jose			
T. Salt	574	564	W	T. Nacimiento			
B. Salt				T. Ojo Alamo			
T. Yates				T. Kirtland			
T. 7 Rivers				T. Fruitland			
T. Queen				T. Pictured Cliffs			
T. Grayburg				T. Lewis Shale			
T. San Andres				T. Chacra			
T. Glorieta				T. Cliff House			
T. Yeso				T. Menefee			
T. Paddock				T. Point Lookout			
T. Blinebry				T. Mancos			
T.Tubb				T. Gallup			
T. Drinkard				T. Greenhorn			
T. Abo				T. Graneros			
T. Wolfcamp	10130	10010	G/O	T. Dakota			
T. Penn				T. Morrison			
T. Cisco				T. Bluff			
T. Canyon				T.Todilto			
T. Strawn				T. Entrada			
T. Atoka				T. Wingate			
T. Morrow				T. Chinle			
T. Barnett Shale				T. Permian			
T. Miss				T. Penn A"			
T. Woodford Shale				T. Penn. "B"			
T. Devonian				T. Penn. "C"			
T. Silurian				T. Penn. "D"			
T. Fusselman				T. Leadville			
T. Montoya				T. Madison			
T. Simpson				T. Elbert			
T. McKee				T. McCracken			
T. Waddell				T. Ignacio Otzte			
T. Connel				T. Granite			
T. Ellenburger				T. Hermosa			
T. Gr. Wash				T. De Chelly			
T. Delaware Sand				T. Pinkerton			
T. Lamar Lime							
T. Bell Canyon	3055	3025	G/O	RUSTLER ANHYDRITE	305	305	none
T. Cherry Canyon	4115	4075	G/O	AVALON SAND	7470	7400	G/O
T. Brushy Canyon	5600	5550	G/O				
T. Bone Springs Lime	6790	6730	G/O				
T. 1st BS Sand	7810	7730	G/O				
T. 2nd BS Carbonate	8115	8025	G/O				
T. 2nd BS Sand	8630	8530	G/O				
T. 3rd BS Carbonate	8945	8835	G/O				
T. 3rd BS Sand							

Drilling Wellbore Schematic

Well Name: CASSIUS FEDERAL COM 1510 234H

County EDDY	State/Province NEW MEXICO	Pad Name CASSIUS PAD W	Wells Drilling on Pad 7
Wellbore API/UWI	Original KB Elevation (ft) 2,997.00	Ground Elevation (ft) 2,997.00	KB-Ground Distance (ft) 0.00
Responsible Grp 1	Contractor Frontier	Rig Number 19	Target Formation WFMP_B

Sidetrack 1 [Horizontal]

Directional schematic (actual)



OD:0.00 in; Wt.:0.00 lb/ft; Top MD:35 ftKB; Depth MD:35-100 ftKB
 OD:13 3/8 in; Grade:J-55; Wt.:54.50 lb/ft; Top MD:31 ftKB; Depth MD:31-414 ftKB

OD:10 3/4 in; Grade:J-55; Wt.:40.50 lb/ft; Top MD:31 ftKB; Depth MD:31-3,005 ftKB

OD:8 5/8 in; Grade:P-110; Wt.:32.00 lb/ft; Top MD:31 ftKB; Depth MD:31-10,640 ftKB

OD:5 1/2 in; Grade:P-110;
 Wt.:20.00 lb/ft; Top MD:31...

Wellbore Sections

Section Des	Size (in)	Act Top (ftKB)	Act Top (TVD) (ftKB)	Act Btm (ftKB)	Act Btm (TVD) (ftKB)
COND	24	27.0	27.0	100.0	100.0
SURF	17 1/2	100.0	100.0	427.0	427.0
SALT STRING	12 1/4	427.0	427.0	3,015.0	2,972.7
INTERMEDIATE 1	9 7/8	3,015.0	2,972.7	10,655.0	10,468.5
PROD	7 7/8	10,655.0	10,468.5	17,328.0	

Wellbore Kick Offs & Key Depths

Type	Top Depth (ftKB)	Depth Top (TVD) (ftKB)
Kick Off	10,714.0	10,527.5
Land	11,440.0	10,996.0
Original Hole TD	17,328.0	

Deepest TVD:

TVD (ftKB)
 11,029.67

Casing Strings

OD Nom Max (in)	Csg Des	Set Depth (ftKB)	# Centralizers (Tally)	OD (in)	Wellbore
	CONDUCTOR	100	0		Original Hole
22	SURFACE	414	5	13 3/8	Original Hole
10 3/4	SALT STRING	3,005	18	10 3/4	Original Hole
8 5/8	INTERMEDIATE 1	10,641	0	8 5/8	Original Hole

Item Description	Casing Description	External Jewelry	Bottom Depth (ftKB)	Btm (TVD) (ftKB)

Drilling Wellbore Schematic

Well Name: CASSIUS FEDERAL COM 1510 234H

County EDDY	State/Province NEW MEXICO	Pad Name CASSIUS PAD W	Wells Drilling on Pad 7
Wellbore API/UWI	Original KB Elevation (ft) 2,997.00	Ground Elevation (ft) 2,997.00	KB-Ground Distance (ft) 0.00
Responsible Grp 1	Contractor Frontier	Rig Number 19	Target Formation WFMP_B

Sidetrack 1 [Horizontal]

Directional schematic (actual)



OD:0.00 in; Wt.:0.00 lb/ft; Top MD:35 ftKB; Depth MD:35-100 ftKB
 OD:13 3/8 in; Grade:J-55; Wt.:54.50 lb/ft; Top MD:31 ftKB; Depth MD:31-414 ftKB

OD:10 3/4 in; Grade:J-55; Wt.:40.50 lb/ft; Top MD:31 ftKB; Depth MD:31-3,005 ftKB

OD:8 5/8 in; Grade:P-110; Wt.:32.00 lb/ft; Top MD:31 ftKB; Depth MD:31-10,640 ftKB

OD:5 1/2 in; Grade:P-110; Wt.:20.00 lb/ft; Top MD:31...

Wellbore Sections

Section Des	Size (in)	Act Top (ftKB)	Act Top (TVD) (ftKB)	Act Btm (ftKB)	Act Btm (TVD) (ftKB)
PROD	7 7/8	16,747.0	11,025.8	21,979.0	

Wellbore Kick Offs & Key Depths

Type	Top Depth (ftKB)	Depth Top (TVD) (ftKB)
ST 1	16,747.0	11,025.8

Deepest TVD:

TVD (ftKB)
11,119.98

Casing Strings

OD Nom Max (in)	Csg Des	Set Depth (ftKB)	# Centralizers (Tally)	OD (in)	Wellbore
6 1/2	PRODUCTION	21,965	75	5 1/2	Sidetrack 1
Item Description	Casing Description	External Jewelry	Bottom Depth (ftKB)	Btm (TVD) (ftKB)	

PERFS: 11,808' - 21,779'

Sante Fe Main Office
Phone: (505) 476-3441

General Information
Phone: (505) 629-6116

Online Phone Directory
<https://www.emnrd.nm.gov/ocd/contact-us>

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

ACKNOWLEDGMENTS

Action 376520

ACKNOWLEDGMENTS

Operator: Earthstone Operating, LLC 300 N. Marienfeld St Ste 1000 Midland, TX 79701	OGRID: 331165
	Action Number: 376520
	Action Type: [C-104] Completion Packet - New Well (C-104NW)

ACKNOWLEDGMENTS

☒	I hereby certify that the required Water Use Report has been, or will be, submitted for this wells completion.
☒	I hereby certify that the required FracFocus disclosure has been, or will be, submitted for this wells completion.
☒	I hereby certify that the rules of the Oil Conservation Division have been complied with and that the information given above is true and complete to the best of my knowledge and belief.

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State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

CONDITIONS

Action 376520

CONDITIONS

Operator: Earthstone Operating, LLC 300 N. Marienfeld St Ste 1000 Midland, TX 79701	OGRID: 331165
	Action Number: 376520
	Action Type: [C-104] Completion Packet - New Well (C-104NW)

CONDITIONS

Created By	Condition	Condition Date
plmartinez	File 3160-4 Completion Report within 10 days of BLM approval.	11/4/2025